

CLAIMS

1. Convertible vehicle (1) comprising a rear boot (3),  
a hood (4) for this rear boot and a roof (2) folding into the  
5 boot (3), a front set of pivots (5) capable of swivelling the  
hood (4) from the rear to the front and a rear set of pivots  
(7) capable of swivelling the hood (4) from the front to the  
rear, each group of pivots (5 and 7) comprising a base (9)  
fixed to the bodyshell (10) of the vehicle, a body (11) which  
10 is linked to the hood (4) via means creating a hinge (12) and  
which comprises a first assembly element (13) capable of  
engaging in a detachable manner a second assembly element (14)  
linked to the corresponding base (9), and means for  
locking/unlocking comprising a first engaging means (16, 160  
15 and 260) linked to the base in a movable manner and capable of  
engaging in a free manner a second complementary engaging  
means (17, 171 and 271) linked to the first assembly element  
so as to, in a locked position, lock the body (11) in relation  
to said base(9), the first assembly element (13, 130 and 230)  
20 of each set of pivots (5 and 7) comprising a third  
complementary engaging means (21) capable of being engaged in  
a free manner with the first engaging means (16, 160 and 260),  
which is designed so as to be able to have several positions  
of which one authorised rotation position of the hood in which,  
25 at the place of one among the front and rear sets of pivots,  
this first engaging means maintains the second complementary  
engaging means engaged with it whilst releasing the third  
complementary engaging means (21) from its engagement, thus  
ensuring the hinge effect during the swivel opening of the  
30 hood, wherein at the place of the other among said front and  
rear sets of pivots (5 and 7), the first engaging means (16,  
160 and 260) releases both the second and third complementary  
engaging means from being engaged with it, so that the hood  
can then be distanced at this place from the bodyshell (10 and  
35 100) by swivelling around said created hinge (12), this first  
engaging means (16) successively meeting and leaning against

the second then third complementary engaging means during the locking of this body (11) in relation to the base (9).

2. Vehicle set forth in claim 1, in which said means  
5 piece creating the hinge (12) of each set of pivots (5 and 7) comprises at least one arm (40 and 41) articulated on one side in relation to the hood (4) and on the other side in relation to the corresponding body (11), wherein the concerned third complementary engaging element (21) is located on this arm or  
10 one of these.

3. Vehicle set forth in claim 2, wherein:

- the second complementary engaging means consists in a backup support (17, 170a and 270a) integral with a leg (43)  
15 of the body (11) on which the concerned arm (40 and 41) is articulated on its said other end;

- the third complementary engaging element consists in a backup support (21) integral with said arm;

- and when the first corresponding engaging means (16)  
20 successively meets and leans against these second then third complementary engaging means during the locking of the body (11) in relation to the base (9), the arm (41) fitted with said third complementary engaging means (21) then itself leans against a part of the leg (43), in the direction of the inter-  
25 engagement of the first and second assembly elements which then engage into each other.

4. Vehicle set forth in claim 3, wherein the part (45)  
of the leg (43) against which the concerned arm (41) leans  
30 during the locking of the body is located passed the second complementary engaging means (17) when the first engaging means (16) engage into these second then third complementary engaging means.

35 5. Vehicle set forth in claim 2, wherein means creating the hinge (12) of each set of pivots (5 and 7) comprises two said substantially parallel arms (40 and 41) and each

articulated, at one end, in relation to the hood (4) and, on the other end, in relation to a leg of the corresponding body (11), each leg having, substantially parallel to longitudinal axis (48) in front of the vehicle and in the closed position of the hood, an elongation, the arm (41) which is fitted with the third engaging means (21) articulating towards an axial end (4c or 4d) of the hood, the other arm (40) being articulated towards the end (43a) of the concerned leg the furthest from the corresponding axial end of this hood, along said longitudinal axis.

6. Vehicle set forth in claim 5, wherein:

- the second complementary engaging means (17, 171 and 271) consists in a backup support integral with the leg (43) on which the concerned arm is articulated on its said other end;

- the third complementary engaging means (21) consists in a backup support integral with said arm (41);

- the first corresponding engaging means (16, 160 and 260) successively meets and leans against these second then third complementary engaging means during the locking of the body (11) in relation to the base (9), the arm (41) fitted with said third complementary engaging means then itself leans against a part of the leg (43), in the direction (18) of the engagement of the first and second assembly elements with each other;

- and said part (45) of this leg is, in the closed position of the hood, located nearer the axial end (4c and 4d) nearest to this hood than the second complementary engaging means (17).

7. Vehicle set forth in any of the previous claims, wherein each first engaging means comprises a locking hook (16) swivel mounted in relation to the corresponding base (9), and the third engaging means (21) which the hook engages during the locking of the body is located past the corresponding

second complementary engaging means (17) during the swivel locking of the hook in relation to the base.

8. Vehicle set forth in claim 7, wherein at the front,  
5 the or each hook (16) is open towards the front and, at the rear, the (each) hook is open towards the rear.

9. Vehicle set forth in any of the previous claims,  
wherein, on one hand, the first engaging means, and on the  
10 other hand, the second and third complementary engaging means (16, 17; 160, 171; 260, 271), respectively have between them first, second and third contact surfaces with co-operative shapes linked to the movement of the first concerned engaging means (16, 160 and 260) on its displacement track, so that for  
15 at least the main part of its stroke, said first engaging means applies a substantially constant pressure on the corresponding second and third complementary engaging means.

10. Vehicle set forth in claim 9, wherein the first and  
20 preferably the second and third contact surfaces have an initial pressure zone (16e, 17a, 170a, 260<sup>e</sup> and 270a1) where, during locking, the contact is initiated between the concerned surfaces, this initial contact zone being tilted in relation to the displacement direction (C, D1 and D10) of the first  
25 engaging means (16, 160 and 260) and interposed across the track of the first engaging means, so that the latter displaces the corresponding second and third engaging means (17, 171 and 271) according to said locking direction, by applying a pressure that increases as the contact continues,  
30 before said pressure becomes and remains substantially constant, whereas the second and third complementary engaging means essentially stop moving along said locking direction.

11. Vehicle set forth in claim 9 or 10, wherein the  
35 first engaging means, preferably a means for hooking (16), is swivel mounted in relation to the corresponding base (9) and has an engagement surface (16c and 160) along which it engages

the corresponding second and third complementary engaging means (17 and 170a), this engagement surface extending according to a circle C whose centre is located on the swivel axle (16b) of the first engaging means.

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12. Vehicle set forth in any of the previous claims, wherein it comprises controlling means (63, 64a and 64b) the first engaging means (16), so that:

10       - for a lock in the closed position of the hood, the first engaging means of the sets of pivots (5 and 7) engage, in a co-ordinated manner, the corresponding second 17 and third 21 complementary engaging means;

15       - for an opening swivelled towards the rear of the hood, during folding away or unfolding of the roof in, or out of, the boot, the first engaging means (16) of the rear and front sets of pivots operates so as to respectively and solely engage the second complementary engaging means (17) of the rear set of pivots (7) and release, in a co-ordinated manner, the second and third complementary engaging means of the front  
20 set of pivots (5), and inversely for an opening swivelled towards the front of the hood, to access a luggage loading zone in the boot.

25       13. Vehicle set forth in claim 8, wherein it comprises means, for example of cylinder type (60), for controlling the swivelling of the hood (4) in a first direction (6), from the rear towards the front, or in the other direction (8), from the front towards the rear, between its closed position and one or other of its open positions (4a and 4b), this vehicle  
30 furthermore comprising means (67) for manually unlocking at least the rear set of pivots (7) from the outside of the vehicle.